PROCESS FOR PLANARIZING PATTERNED METAL STRUCTURES FOR MAGNETIC THIN FILM HEADS

ABSTRACT OF THE DISCLOSURE

A process for planarizing a patterned metal structure for a magnetic thin film head includes the steps of applying an encapsulation/planarizing material on a substrate, spinning the substrate in a photoresist spinner or similar machine, curing the encapsulation/planarizing layer by energetic particles such as an electron beam. The planarizing process further comprises the step of polishing the entire structure using a conventional chemical-mechanical polishing step. The curing step takes place at the substrate temperature less than 200°C, which prevents the damages of the thin film head structures such as MR and GMR sensors. This process is cheap, efficient and easy to apply.